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(58) Field of Search

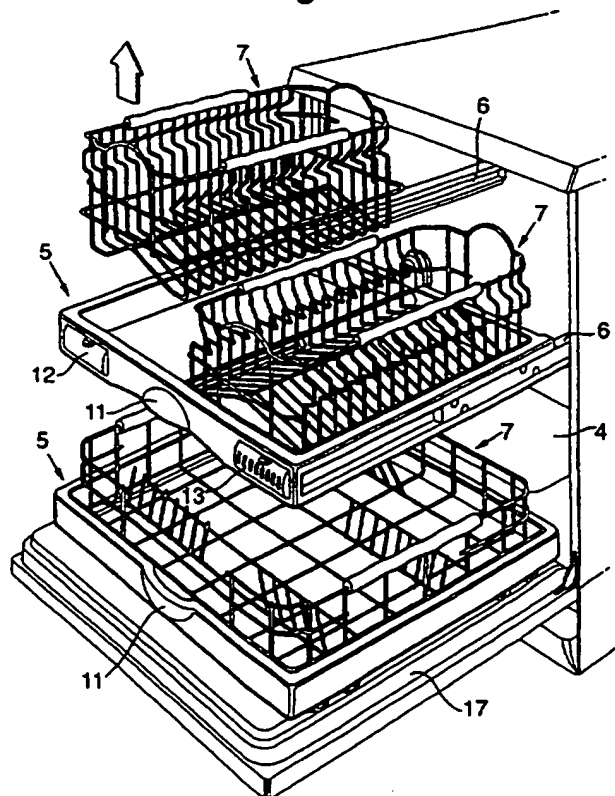
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(54) Abstract Title

**Dishwasher with removable dish baskets**

(57) Accommodated in the washing compartment (4) of the machine is at least one frame (5) capable of sliding horizontally to be extracted from the washing compartment when a loading door (17) is opened. At least one basket (7) for the dishes is laterally supported by the frame (5) substantially at a position corresponding to a shaped base portion (8) thereof. This permits a rational and ergonomic structure for the basket.

Fig.2.



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Fig.1.

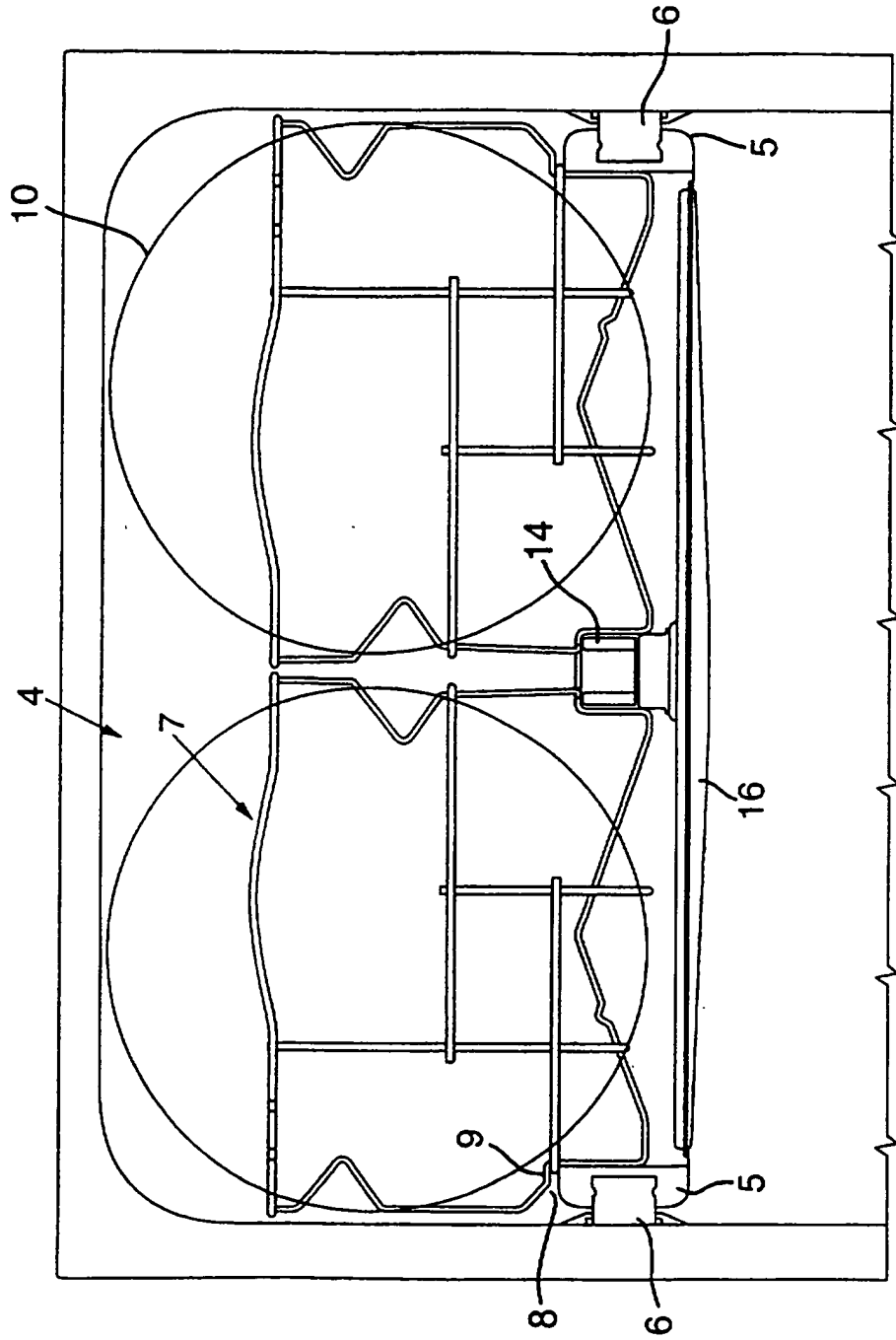


Fig.2.

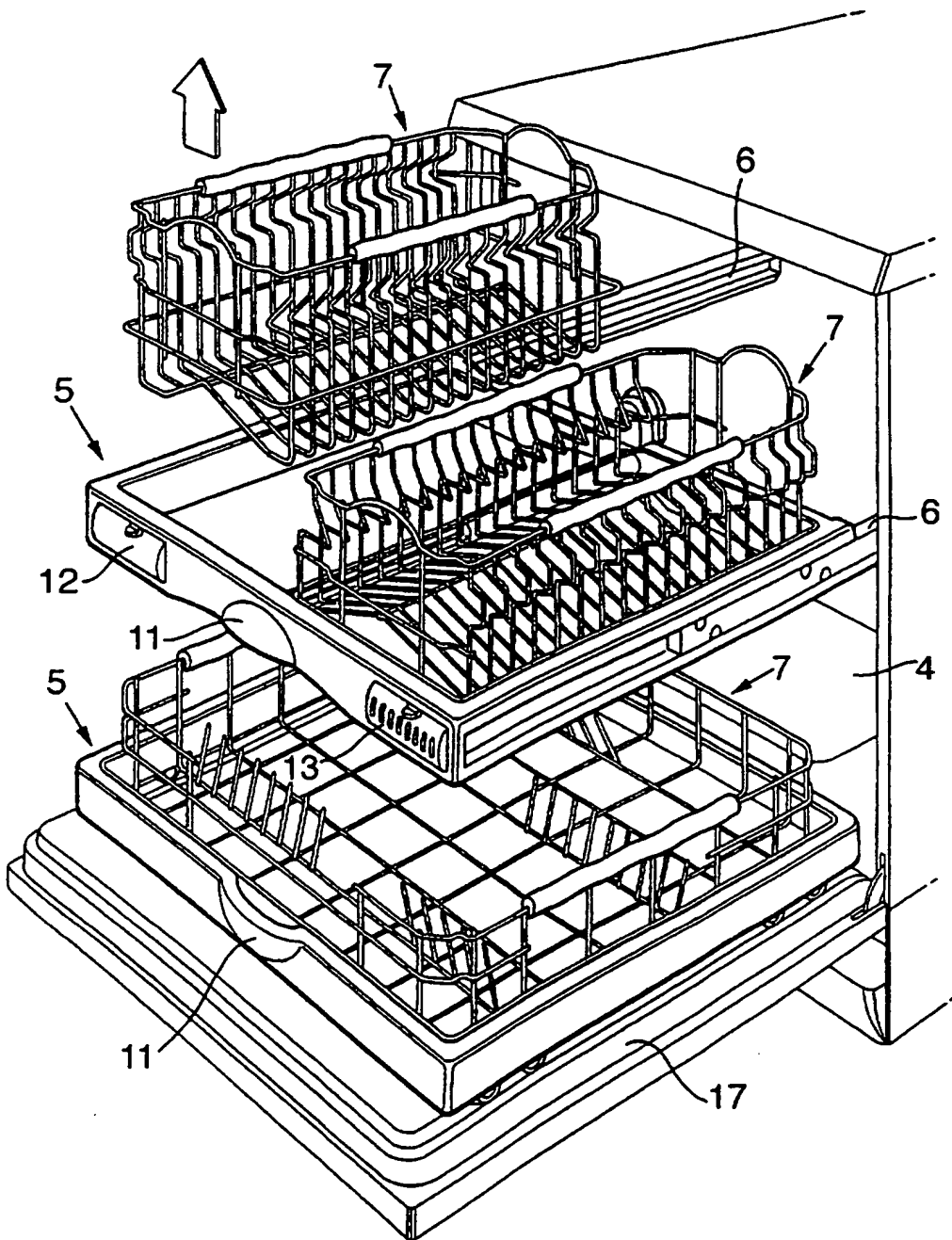
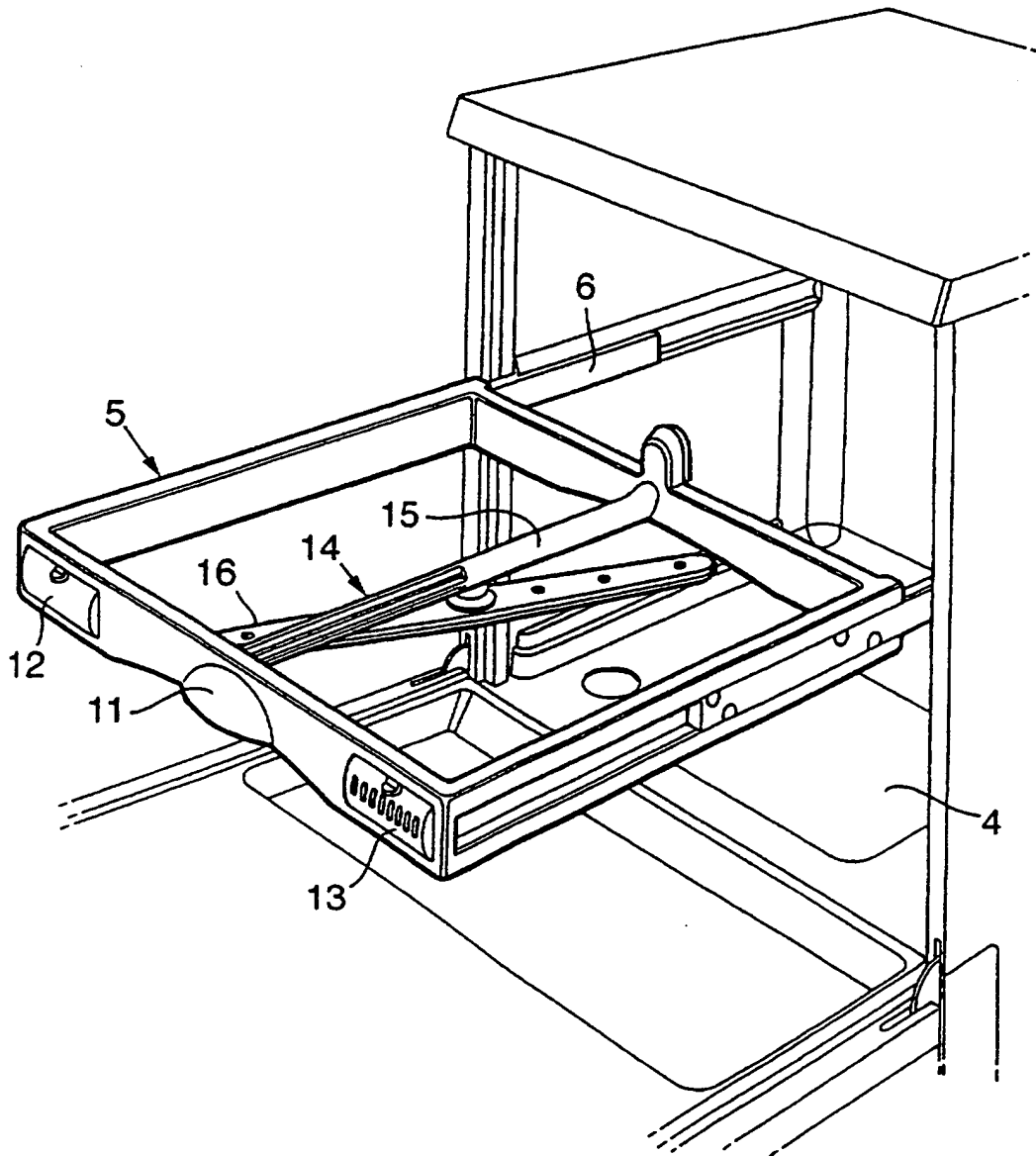


Fig.3.



## DISHWASHER WITH REMOVABLE BASKET

The present invention relates to a dishwasher with at least one basket capable of supporting the dishes and being extracted removably from a washing  
5 compartment for conveniently and easily loading and unloading the dishes.

A dishwasher of that type is described in Italian utility model No 20469 B/78 filed on 12th January 1978. In accordance with that solution, a plurality of complementary baskets are supported removably by a frame which is horizontally extractable by a sliding movement from the washing compartment. In particular, the  
10 baskets are supported by the upper surface of the frame, on which rests an upper projecting edge of the baskets themselves, which therefore are completely fitted into the support frame, the latter obviously being disposed at a correspondingly elevated level in the washing compartment.

In order to remove the baskets from the dishwasher, disengaging them  
15 from the frame, it is thus necessary to raise the baskets over the entire height thereof, and that operation moreover has to be effected at an undesirably high level from the ground, such as to require the user to carry out the operation with the arms substantially raised. If it is borne in mind that this vertical extraction operation is normally effected with baskets which are loaded with dishes, it seems evident that the operation is thus  
20 undesirably inconvenient and tiring.

In addition since the baskets have to be fitted into the support frame from above, their width is necessarily limited by the internal dimensions of the frame, whereby the loading capacity of the baskets is thus correspondingly limited.

Therefore the aim of the present invention is that of providing a  
25 dishwasher having removable baskets, of a particularly simple and ergonomic structure.

Another aim of the invention is to provide a dishwasher of the indicated type with which the removable baskets have an improved loading capacity.

According to the present invention there is provided a dishwasher comprising a washing compartment in which is accommodated at least one frame capable  
30 of sliding horizontally in such a way as to be extracted from the washing compartment when a loading door is opened, said frame removably supporting at least one basket for the dishes, wherein said basket is laterally supported by the frame substantially at a position corresponding to a base portion thereof.

The features and advantages of the invention will be clearly apparent from the following description given solely by way of non-limiting example with reference to the accompanying drawings in which:

Figure 1 is a partial diagrammatic front view of a dishwasher according to  
5 the invention,

Figure 2 is a partial perspective view of a preferred embodiment of the dishwasher according to the invention, shown with the door open and baskets in the extracted position, and

Figure 3 shows the view of Figure 2 in which the baskets and other  
10 components have been removed, in order better to illustrate the machine.

Referring to Figures 1 and 2, the dishwasher primarily comprises a washing compartment 1, in the interior of which is mounted at least one quadrangular frame 5 which is preferably made of rigid plastics material and which is slidable on suitable guides 6 in such a way that it can be extracted horizontally from the washing  
15 compartment when a loading door 17 is opened.

Preferably, there are provided a lower frame 5 and an upper frame 5 which are mounted slidably with respect to the washing compartment 4 at positions corresponding respectively to the bottom and an intermediate position of the washing compartment.

20 Each frame 5 is capable of removably supporting one or more complementary baskets 7 for the dishes to be washed. In the example described herein, the lower frame 5 supports a single basket 7 while the upper frame supports two complementary baskets 7 in side-by-side relationship.

In any case each basket 7 is laterally supported by the respective frame 5  
25 substantially at a position corresponding to a base portion thereof.

In particular, as shown in Figure 1 in relation to the upper frame 5, the baskets 7 preferably have a base which is shaped with undercuts 8 which are capable of engaging with the support frame 5, the upper surface of which supports a substantially horizontal portion 9 thereof. At a position corresponding to such a horizontal portion 9,  
30 the structure of each basket 7 is enlarged outwardly in such a way as to occupy in respect of width the maximum space permitted by the interior of the washing compartment 4. Similar considerations can be applied to the lower frame 5.

Preferably moreover the bottom of the baskets 7 does not project substantially below the respective support frame 5 which however advantageously prevents the baskets from being moved on a horizontal plane before being vertically disengaged from the frame.

5           The operations for removal of the baskets 7 from the respective frames 5 are particularly facilitated by the fact that, in order to be disengaged from the respective frame, the baskets require lifting only over a short distance corresponding to the height of the base undercuts 8, as indicated by the arrow in Figure 2. That operation is then further assisted by the relatively lowered position of the frames 5, whereby the user can  
10 load and unload the baskets 7 with respect to the frames 5 in an advantageously ergonomic fashion such as to minimise the efforts and strains involved, even with a full load.

Unlike the known structures referred to in the introductory part moreover the width of the removable baskets 7 is not substantially limited by the dimensions of the  
15 support frames 5. The latter can limit the width of the baskets 7 only at positions corresponding to the undercuts 8, that is to say at a position corresponding to a negligible base zone which substantially does not interfere with the dishes, in particular with the plates (even of large sizes) which are normally loaded in an erect position on the upper baskets 7 and which are diagrammatically indicated by reference 10 in Figure 1.

20           The described dishwasher can be the subject of numerous modifications which still fall within the scope of the invention.

Referring now also to Figure 3 for example the internal structure of the dishwasher may be further rationalised and rendered compact by virtue of the fact that each frame 5 may integrally comprise auxiliary components such as a respective handle  
25 11 and/or additive dispensers 12, 13.

In addition, at least the upper frame 5 may integrally comprise a portion of the hydraulic circuit of the machine. In particular the upper frame may comprise an intermediate longitudinal member 14 (or a transverse member, according to the circumstances involved) which strengthens the structure thereof and incorporates the final  
30 section 15 of a water feed conduit for a rotary spray assembly 16 supported by the longitudinal member 14 in such a way as to rotate freely below the frame 5.

As shown in Figure 1 the longitudinal member 14 may advantageously also constitute a further support element for the baskets 7 of modular type.

## CLAIMS

1. A dishwasher comprising a washing compartment in which is accommodated at least one frame capable of sliding horizontally in such a way as to be  
5 extracted from the washing compartment when a loading door is opened, said frame removably supporting at least one basket for the dishes, wherein said basket is laterally supported by the frame substantially at a position corresponding to a base portion thereof.
- 10 2. A dishwasher according to claim 1 wherein said base portion of the basket is shaped with undercuts capable of engaging with said support frame whose upper surface supports a substantially horizontal portion thereof.
3. A dishwasher according to claim 2 wherein said basket enlarges outwardly  
15 at a position corresponding to said horizontal portion.
4. A dishwasher according to claims 2 wherein, at a position corresponding to said undercuts, said base portion of the basket is contained within said support frame.
- 20 5. A dishwasher according to any one of the preceding claims, wherein said support frame integrally comprises at least one handle.
6. A dishwasher according to any one of the preceding claims, wherein said support frame integrally comprises auxiliary components of the machine such as additive  
25 dispensers.
7. A dishwasher according to any one of the preceding claims, wherein said support frame integrally comprises at least one longitudinal reinforcing member including a portion of a water feed conduit for means for spraying the dishes.  
30
8. A dishwasher substantially as hereinbefore described with reference to and as illustrated in the accompanying drawings.